LETTERS TO THE EDITOR

Ciprofloxacin resistant *Neisseria gonorrhoeae* in the UK

Ciprofloxacin has been shown to be highly active against *N gonorrhoeae* and 100% cure rates for uncomplicated genital infections have been reported from single 250 mg doses,[1,2] and this activity has been reported to be retained against penicillin resistant strains.[3,4] In consequence ciprofloxacin is now regarded as an effective alternative to the penicillins, and suitable for use when infection with penicillin resistant strains is likely, either in treatment failures or in patients returning from areas with a high incidence of antibiotic resistant gonococci.

Unfortunately in those parts of the world where this drug is used extensively (especially if other quinolones were used in the past) increased levels of resistance of up to 0·5 mg/l have been observed.[5] In-vitro work[6,7] has shown that strains becoming resistant to one quinolone have increased resistance to other members of the group.

We report what we believe to be the first recognised isolation in the United Kingdom of a strain of *N gonorrhoeae* showing significantly reduced sensitivity to ciprofloxacin.

A 44 year old man with a urethral discharge presented to a general practitioner on his return from Thailand. Erythromycin was prescribed with no improvement. The patient then attended the local Department of Genitourinary Medicine and was treated with spectinomycin 2g. He then defaulted and was lost to follow-up. A strain of *N gonorrhoeae* was isolated from the urethral pus. After local examination it was sent to the PHLS Gonococcus Reference Unit (GRU) at Bristol. Here it was confirmed to be a penicillinase-negative chromosomally resistant strain of *N gonorrhoeae* (CMRNG) sensitive on disc testing to erythromycin and requiring the following minimum inhibitory concentrations (MIC):—benzylpenicillin 1·25 mg/l; cefuroxime 0·64 mg/l; tetracycline 4 mg/l; spectinomycin 32 mg/l. Most notable in this isolate was the MIC of 0·1 mg/l for ciprofloxacin.

All 1086 isolates of *N gonorrhoeae* received by the GRU in 1988 were tested against ciprofloxacin. Their median MIC was 0·0032 mg/l (range 0·0016–0·05 mg/l). Sixty-six of these were CMRNG and in this group the median MIC for ciprofloxacin was 0·0064 mg/l (range 0·0032–0·0125 mg/l). Thus the strain isolated in Grimsby was almost 10 times more resistant than the most resistant CMRNG isolate previously tested at the GRU.

The recognition of strains of *N gonorrhoeae* with high MICs for ciprofloxacin must raise a note of caution in the use of single dose ciprofloxacin in the treatment of uncomplicated genital gonorrhoea, especially in patients where possible penicillin resistance may make this a favoured regime.[5]

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Male genital ulcerations in Paris (France): Absence of correlation between clinical aspect and microbiological data.

Between November 1986 and June 1987, 75 consecutive male patients (mean age 35 years) consulting for genital ulceration at the STD clinic of Hôpital Saint-Louis, participated in a prospective study for an aetiological evaluation.

In each patient the following pathogens were searched for in the ulceration: *Treponema pallidum* (dark field examination), *Haemophilus ducreyi* (Gram smear and culture), *Chlamydia trachomatis* (culture), *Neisseria gonorrhoeae* and common bacterial pathogens (Gram stain and culture), *Herpes simplex* virus (culture). Sera were tested for the presence of antibodies against *T. Pallidum*, *C. trachomatis* and HIV 1.

The results are shown in the table. They reflect the urban-poor population consulting at our clinic, consisting mainly of migrants from Central Africa (35·4%), French Caribbean (37·1%) and Maghreb (16·1%), mostly heterosexual (94%) and having sex with female prostitutes in Paris (81%). These epidemiological data explain the persistence of chancroid which is endemic in Paris, mainly in black migrants.[1]

Herpes is also a major cause of genital ulceration in our experience although it is still more frequently reported in Sheffield.[2] We have excluded from this study cases of recurrent herpes simplex whose diagnosis was clinically evident (vesicles).

In 17·3% of the cases no pathogen was found, as compared with 10% in Sturm's[3] and 27% in Mabey's[4] studies.

We studied the predictive value of clinical parameters (induration, location, size, number of the ulceration—lymph node enlargement, size and pain) and did not find any correlation with the three major etiologies: syphilis, chancroid and herpes.

Moreover, in 26 patients out of 62,

Table Male genital ulcerations, Hôpital Saint-Louis, Paris. 75 cases. November 1986–June 1987

Chancroid	24 (32·08%)
Primary syphilis	19 (25·3%)
Herpes	19 (25·3%)
No pathogen	13 (17·3%)

an erroneous clinical diagnosis was alleged by the physicians, all quite experienced in STD. Similar results have been experienced by other workers[3 5 6] and may be due to the high incidence of secondary infections of the ulcers: 18/62 in our series (*N. gonorrhoeae*, *H. para-influenzae*, *S. aureus*, streptococci group B and G).

Thus, the precise aetiological diagnosis of a genital ulceration cannot rely on the clinical impression and must be established by complete microbiological examination.

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Preliminary evaluation of cold coagulation as a treatment for cervical intraepithelial neoplasia in a department of genitourinary medicine

A cold coagulator was obtained by this department in early 1988. This is a preliminary evaluation of the outcome of the first 152 patients with cervical intraepithelial neoplasia (CIN) who were treated by this method. The mean length of follow-up to last visit (at the time of analysis of the data) was only 5·8 months, and a further analysis will be made at a later stage.

The 152 patients were aged between 16 and 50 years (mean 24·7). More than half (53%) of the patients smoked cigarettes, 67% had a history of genital warts or sexual contact with a person with genital warts, and 27% had a past history of gonorrhoea, chlamydia or trichomoniasis.

Cervical cytology was reported as normal in 32% of patients, who underwent colposcopy because of a history of genital warts. Mild, moderate and severe dyskaryosis was reported in 39%, 19% and 11% respectively.

At colposcopy, the total lesion size was roughly graded as small, medium and large in 48%, 48% and 5% of cases respectively. No CIN was present on biopsy in 3% of patients (who were treated because of persisting cervical wart virus infection); however CIN 1 was found in 44%, CIN 2 in 33% and CIN 3 in 16%. Wart virus changes were present on biopsy in 83% of cases.

Treatment was carried out using a cold coagulator at 100°C in overlapping applications, each of 20 seconds, to the entire transformation zone and lower canal. No anaesthesia was used. The average duration of treatment was 2 minutes.

Follow-up cytology was performed at 4, 8 and 12 months post-treatment, followed by colposcopic assessment at 18 months. It was not feasible to undertake colposcopy at each follow-up visit, although this may have improved the detection of unsatisfactory outcomes. Nine patients defaulted from follow-up; nine were not followed up by us because they had moved away from Liverpool. It was noted that three of the defaulters had pre-treatment histology showing CIN 3.

Of the remaining 134 patients who did attend for follow-up, the pre-treatment histology showed no CIN (3%), CIN 1 (43%), CIN 2 (37%) and CIN 3 (16%).

In 103 patients post-treatment cytology was negative (77% of the evaluable patients), although 59 of these have so far only had one follow-up smear.

In seven patients (5%) the follow-up cytology showed definite dyskaryosis, which was in each case detected at the first follow-up visit. Three of these had CIN 3, three had CIN 2, and these patients underwent re-colposcopy and further procedures. No factors associated with treatment failure were detected.

In 24 patients there were equivocal results, including borderline CIN, wart virus changes and dyskeratosis. The borderline changes may have been due to residual inflammatory changes resulting from treatment. It was noted that 48 of 101 patients with good outcomes (48%) had wart virus changes present on pre-treatment cytology, compared with 16 of 22 patients (73%) with equivocal outcomes (no data on two patients in each group), a trend which approaches statistical significance at the 5% level. It is possible that this finding merely demonstrates that cold coagulation does not eliminate wart virus from the genital tract, because the equivocal outcomes may be due to persisting wart virus changes.

A cold coagulator is much cheaper than a laser, and treatment is easier and quicker. Even without any anaesthesia, the treatment was well tolerated by patients who described mild to moderate discomfort lasting for the brief duration of the treatment. Some patients developed vaginal discharge or slight bleeding following treatment, but no serious complications were noted. No cases of cervical stenosis were seen.

The value of good communication with patients was clearly apparent, both in allaying anxiety and in reducing the default rate, and it was noted that most defaulters belonged to the first batch of patients that were treated. Accurate records were difficult to maintain without the benefit of a computer system.

We conclude that cold coagulation has an integral role in the treatment of CIN in a department of Genito-Urinary medicine.

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